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Maryland Agricultural College, College Park, Md.

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Second Emergency Circular on Pear Blight.

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Two circulars have already been issued this season on the subject of Pear Blight, and the prevalence and destructive nature of this disease, makes a third circular necessary at this time. Within the past two weeks a great deal of blight has been cut out and burned in accordance with directions given in circular number 9. We can now see the result of that treatment. If the cutting was severe enough to remove all the blight-producing organisms, the trees have a green healthy appearance and are doing well. If the cutting was not severe enough the disease was only slightly checked in its course down the limbs and branches, as evidenced by the appearance of more dead leaves and by a discoloration of the bark toward the ends of the cut branches. The failure to cut far enough below the point of attack to remove the disease entirely, was due in part to the fact that the growers were desirous of saving as much of the fruit as they could, and of mutilating the trees as little as possible. In all cases where the trees were not cut severely enough it will be necessary to go over them again and cut back until the bark, wood and pith have a perfectly healthy appearance, regardless of the loss of fruit or wood, since if the blight is left in the trees the blighted branches will die before the fruit has time to mature. In many instances no effort has been make to remove the blight from the deceased trees. This is due in a measure to the excess of work at this season and the inability to get the necessary amount of extra help, and also to a misunderstanding in regard to the nature of the disease.

It is still the belief of some growers that pear blight is due to the effects of hot or cold winds, of bright sun, of frosts or other weather conditions, or of soil conditions, or that it is due to the effects of an insects sting. A study of the disease however shows that it is produced by a minute organism (a bacterium) that usually, though not always, enters the tree through the blossoms and works its way downward in the sap between the bark and the wood. It is known that these organisms produce the disease, 1st because we can see them by the aid of a microscope in the sap of diseased branches. 2d because it is possible to take these organisms from diseased trees and to inoculate healthy trees with them. 3d because the disease when once introduced into a branch gradually spreads until the whole branch or even the whole tree may be destroyed. It is well known that the effects of winds, heat, cold, insect stings etc., are not contagious and do not spread in any way similar to the blight. The most important step in controlling the disease at the present time consists in cutting out and burning the diseased branches, as stated in a previous circular. The longer this step is delayed the more severe the cutting must be and the greater is the danger to the life of the tree. Some trees at this time are in their most critical stage. If taken in hand at once they may be saved; if left a few days longer the blight will be so far down in the branches that no treatment will be of any use, and no alternative will be left but to dig them up and burn them. Observation and experience also show that cultivation and fertilization have a tendency to increase the blight. As already stated the blight-producing organisms live in the sap, hence those conditions that tend to increase the sap, and produce a succulent growth favor the developemeut of the blight. For this reason it would be advisable to get orchards affected with blight down in sod as soon as possible, and to leave them in that condition for one or more years until the blight is eliminated or until it is reduced to a minimum. It need hardly be said that the blight is the most destructive enemy of the pear at present in this state, and that it seriously threatens the destruction of this important industry unless active measures are taken at once for its suppression.